



Variable speed drives  
VLA1

Product designation

Product type designation

**General characteristics**

Rated power supply voltage

200...240VAC  
50/60Hz

Rated output voltage

VAC

Three-phase  
0...240VAC 0-  
599Hz

Rated output current

A

1.7

Rated output power

kW

0.25

Rated output power

HP

0.33

EMC filter

Built-in EMC  
suppressor cat.  
C2

Communication port

None

**Technical features**

Input type

Single-phase

Rated mains voltage

VAC

200...240

Operating mains voltage range

VAC

170...264

Rated mains frequency

Hz

50/60

Operating mains frequency range

Hz

45...65

Rated mains current without mains choke

4

Rated mains current with mains choke

3.6

Output type

Three-phase

Output voltage range

VAC

0...240

Output frequency range

Hz

0...599

Current overload

%/s

150% for 60s,  
200% for 3s

Power loss

15W

Brake chopper

No

Switching frequency

2...16kHz

Max motor cable length

Shielded

Without EMC category

m

50

Category C2

m

15

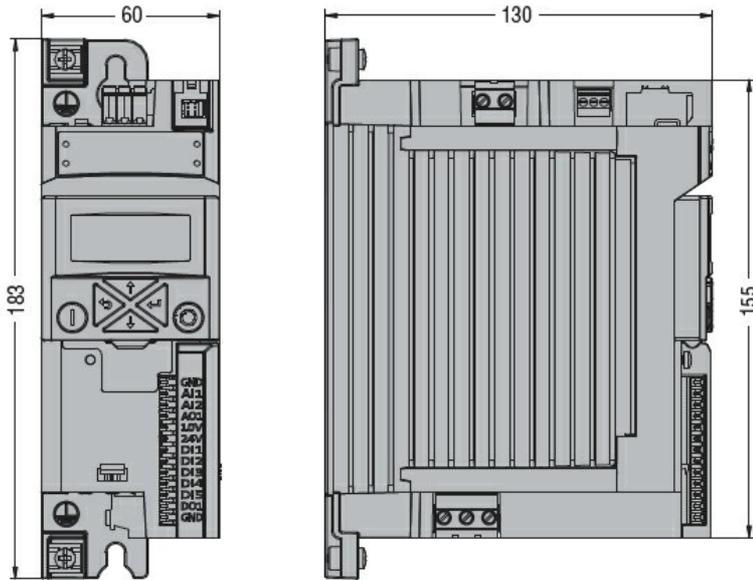
**Functions**

Motor control modes

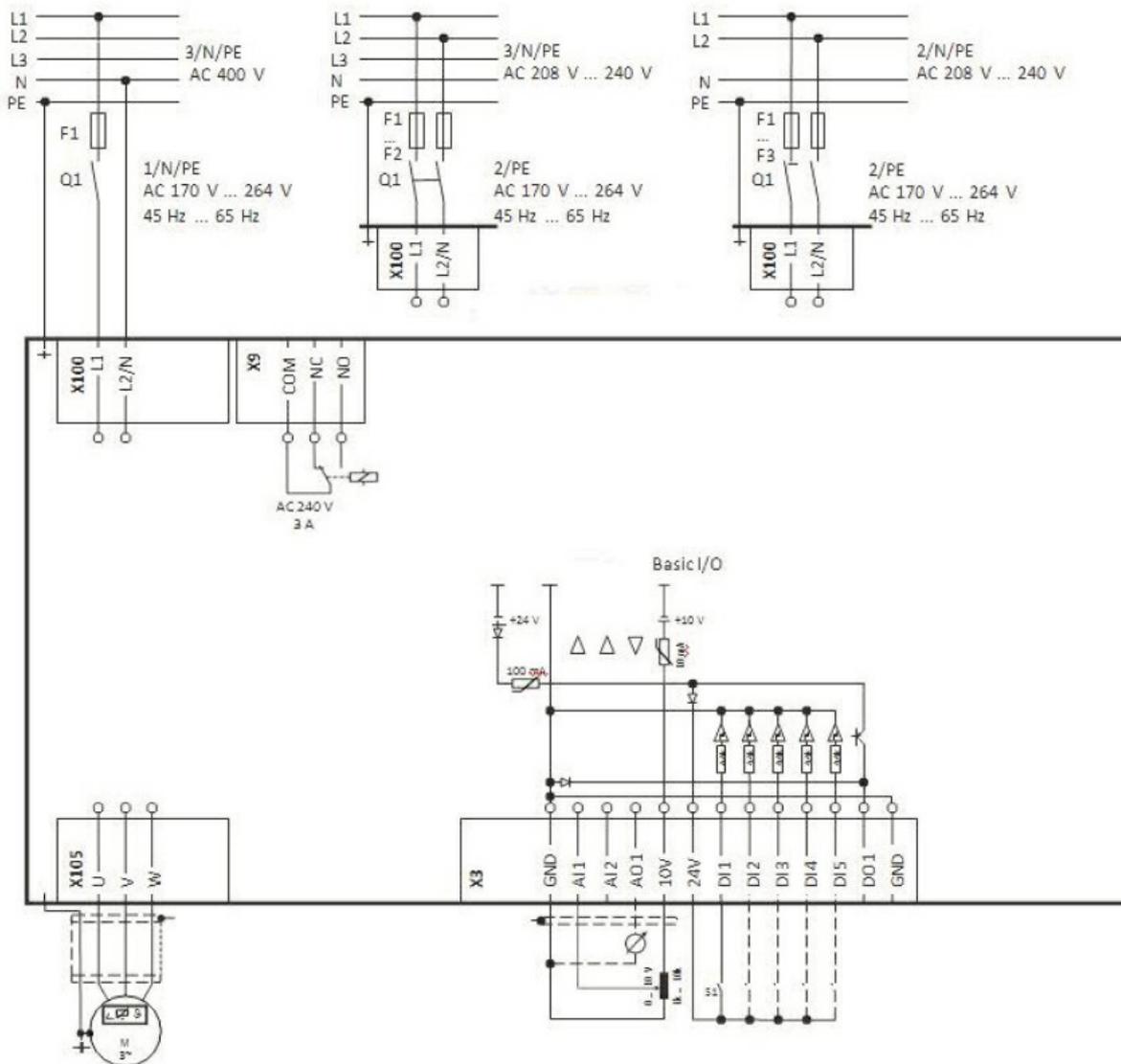
V/f linear,  
quadratic torque,  
sensorless  
vector control,  
ECO mode

Speed reference signals	External potentiometer 0...10kΩ Voltage signals: 0...10VDC Current signals: 0/4...20mA Buttons on front keyboard Door-mount installation kit 15 preset speeds via digital inputs Motor potentiometer Fieldbus
3-wire control	Yes
S-shape curves	Yes
Slip compensation	Yes
Flying restart	Yes
Access to DC bus	No
DC braking	Yes
DC injection at start	Yes
PID control	Yes, with sleep and rinse function
Sequencer (programmable frequency/time cycles)	Yes
Preset speeds	Yes
Motorpotentiometer	Yes
Different parameter configuration sets	Yes
Parameters changeover function	Yes
Favorite parameters menu	Yes
Autotuning	No
Safe torque Off (STO) safety function	No
PTC probe input	No
Protections	Overcurrent Output short circuit and earth/ground leakage Overvoltage Undervoltage Phase loss Motor heat overload (i2t) Overspeed Speed reverse
Special funct.	Multi-pump PID control (1 main pump frequency regulated + 2 auxiliary pumps activated in direct mode in case of necessity)
<b>Input and Output</b>	
Number of digital input	Nr. 5
Digital input type	Selectable PNP or NPN logic

Number of digital output	Nr.	2
Digital output arrangement		1 relay output with changeover contact (C/O-SPDT) + 1 digital output
Output contacts ratings		Relay output: 3A 250VAC Digital output: 100mA max 30VDC
Number of analog input	Nr.	2
Analog input type		Analog input 1: configurable 0/2...10VDC, 0...5VDC, 0/4...20mA Analog input 2: configurable 0/2...10VDC or 0...5VDC
Number of analog output	Nr.	1
Analog output type		configurable as 0...10VDC, 0...5VDC, 2...10VDC, 0/4...20mA
<b>Ambient conditions</b>		
Temperature		
Operating temperature		
	min	°C -10
	max	°C +55
	Current derating	
		2.5%/°C over 40°C
Storage temperature		
	min	°C -25
	max	°C +60
Relative humidity	%	5...95% (with no condensing)
Max altitude	m	4000m (over 1000m derate the rated current by 5%/1000m)
Maximum Pollution degree		2
Overvoltage category		III up to 2000m altitude (II above 2000m)
<b>Housing</b>		
Installation position		Vertical
IP degree of protection		IP20
Dimensions (W x H x D)	mm	60 x 183 x 130
Weight	Kg	0.75
<b>Dimensions</b>		



**Wiring diagrams**



**Certifications and compliance**

Compliance

CSA 22.2 No. 274

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EN 61800-5-1

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UL61800-5-1

Certificates

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cULus

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EAC

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RCM

ETIM classification

ETIM 8.0

EC001857 -  
Frequency  
converter =< 1 kV